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THE BRYOLOGIST

VOL. XVII SEPTEMBER, 1914 NO. 5

NORTH AMERICAN SPECIES OF THE GENUS RAMALINA.—PART VII

R. HEBER HOWE, JR.

SECTION: *Fusisporae* R. H. Howe, Class. Fam. *Usneaceae*, l. c. 18, 1912.

Asci containing 8 hyaline, fusiform spores $\frac{16\text{-}35}{3\text{-}7}\,\mu$.

KEY TO THE SERIES *Fusisporae*.

Laciniae subterete throughout........................*Montagnei*
Laciniae never subterete throughout (compressed)......*stenospora*

Ramalina Montagnei DeNot.

SYNONYMY: *Ramalina Montagnei* DeNot. Frammenti lich. Giorn. Bot. Ital. **2**: 218. 1846.

Ramalina rigida b. *Montagnaei* sensu Tuck.

(?) *Ramalina gracilenta* Fr. l. c.

TYPE: In the museum Instituto e orto Botanico, Rome, fide Dr. R. Pirotte.

TYPE LOCALITY: "Nelle Antille." Cuba.

ORIGINAL DESCRIPTION: "Thallo dense caespitoso, ramis alterne vel subdichotome ramosis, intricatis, linearibus, compressis, flexuosis, rigidis, nitidis, fulvescentibus, torulosis subindeque foraminulosis, superne sensim augustatis, ramella acutei formia sparsa, approximatare emittentibus, apotheciis thallo concoloribus, marginalibus, dorsalibusque, primum tuberculifinuibus vertice impressis, demum patellaribus, convexiusculis, brevissime pedicellatis, margine thallode incumbente, crinulato, erosore cinctis, basi imbilicatis, sulcoque peripherico impresso exaratis subapophysatis, sporidiis cylindracis utrinque obtusis, diametro septies longioribus." l. c.

FIGURE: *Pl. XI. f. 1.*

DIAGNOSIS: *Thallus* caespitose, *terete* or *subcompressed*, *rigid*, *estriate-tuberculate*, apices *filiform*, apothecia *marginal*, small, spores straight. KOH—.

DESCRIPTION: *Thallus* caespitose (max. length 9 cm.), rigid, virescent; *cortex* nitidous, tuberculate; *laciniae* dichotomous, subterete or compressed, torulose, apices filiform.

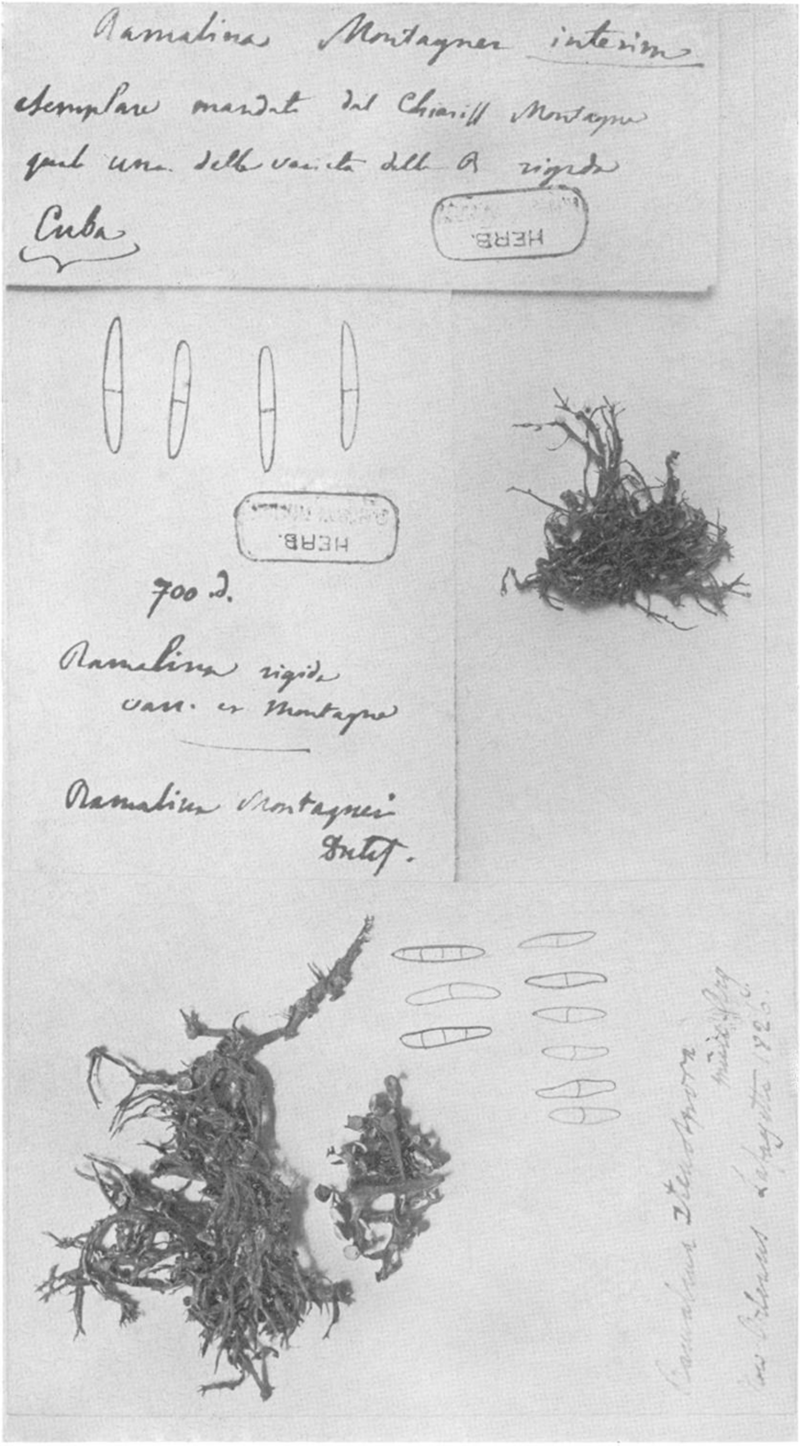
Apothecia common, small, marginal, subterminal, rarely spurred, concave at length convex, marginate, finally immarginate (max. diam. 3 mm.), disk buff. *Spores* fusiform, straight or substraight $\frac{20\text{-}28}{3\text{-}5.5}\,\mu$.

CONTINGENT PHASES: (a) Sorediate-tuberculate.

SUBSTRATA: On trees.

DISTRIBUTION: Uncommon in the Austral Zone.

The July number of THE BRYOLOGIST was published August 17, 1914.



Ramalina Montagnei interim

esemplare mandato dal Chiariss Montagne
qual una della varietà della R rigida

Cuba

700 d.

Ramalina rigida
var. ex Montagne

Ramalina Montagnei
De Not.

Ramalina [illegible] mihi 18[illegible]
[illegible] Orleans Lafayette 1826

STATIONS: FLORIDA: Ponce, Daytona; LOUISIANA: St. Martinsville; CUBA: San Jose de las Sejas; JAMAICA.

OBSERVATIONS: This species, distinct from *R. attenuata* on account of its spores, seems rarely to intergrade with the following species. Nylander determined cotypes (Herbarium Lenorm) of Müller Arg. as this species before the latter described his wholly compressed, but otherwise superficially similar species. Until a larger series of specimens is examined the true status of the two plants is uncertain. Miss Cummings's distribution under *R. r. Montagnaei* (see Exsic. with next species) KOH— may be referred to *R. stenospora* KOH + as also the material KOH— I recorded from Southampton, Long Island (Rhodora **12**: 7. 1910). Tuckerman recorded the present species from South Carolina, Florida, Louisiana, and Texas. Miss Cummings's material, and two specimens sent me by Dr. A. C. Herre from San Benito and San Roque islands, California, are alike in their reaction KOH+, have lateral as well as marginal apothecia, with distinctly striate laciniae, and represent no doubt the following species. The Cotypes (KOH+) before referred to of course belong under *R. stenospora*.

EXSICCATI: *No. 181*. Decades No. Amer. lich. Cummings, etc. Corpus Christi, Texas, Mar. 1895, *A. A. Heller*.

No. 112. Lich. Boreali-Amer. Cummings, etc. the same, both called *Ramalina Montagnei* De Not.

Ramalina stenospora Müll. Arg. Flora **60**: 477, 478. 1877.

SYNONYMY: *Ramalina caespitosa* Tayl. in herb.

TYPE: In Herbier Boissier, Chambésy, Switzerland, fide author.

TYPE LOCALITY: "Nouvelle Orléans Louisianiae."

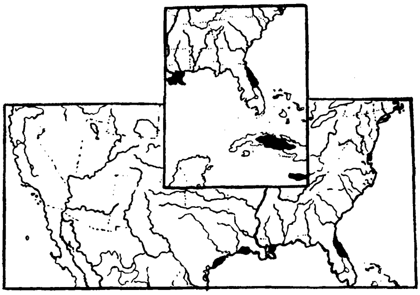


FIG. 1.—Distribution of *Ramalina Montagnei* and *R. stenospora*.

ORIGINAL DESCRIPTION: "thalli laciniae 1–1½-pollicares, lanceolato-lineares, depauperato-lineari-laciniatae, plano-compressae, subinde minute lacinulatae, 1–4 mm. latae, subacuminatae, rigescentes, fuscescenti - pallidae, irregulariter et crebre albido-striato-costulatae, caeterum laeves, v. interdum tuberculis paucis marginalibus adspersae, opacae; apothecia lateralia et terminalia, praeter juvenilia subpapillari-gyalectiformia circ. 2–3½ mm. lata, podicellata, dorso subconcentrice subsoredioso-albo-lineolata margo subinteger et tenuis, discus demum plano-convexus, albescenti-pruinosus; sporae 15–22μ. longae, tantum 3 v. 3½μ. latae, naviculares, utrinque acutiusculae, rectae v. hinc inde obsolete curvatae v. obsolete sigmoideae." l. c.

Figure: *Pl. XI. f. 2.*

Diagnosis: *Thallus* caespitose, *compressed, rigid, striate-tuberculate* apices compressed, apothecia *lateral,* spores substraight (KOH+ ?)

Description: *Thallus* caespitose (max. length 8 cm), rigid, stramineous to virescent; *cortex* glabrous, striate-tuberculate; *laciniae* compressed throughout, dichotomous, apices compressed attenuate. *Apothecia* common, lateral, occasionally spurred, concave at length convex, marginate (max. diam. 4 mm.), disk buff. *Spores* fusiform, straight $\frac{(18)\ 22\text{–}34}{3\text{–}6}\ \mu$.

Contingent phases: (a) Stramineous.

Substrata: On trees.

Distribution: Not uncommon in the lower Austral Zone from Massachusetts (Westport) to Texas and west to California. (phase a.)

Stations: California: San Roque Island; San Benito Island; Madgalena Island; Massachusetts: Westport; New York: Southampton; Texas: Corpus Christi; Galveston Bay; Florida: Jacksonville; George; Daytona; St. George Island; Green Coe Spring; Jamaica: Louisiana: New Orleans; Pt. a la Hache.

Observations: This species suggesting the stock of *R. complanata* except for its fusiform spores is distinguished from *R. Montagnei* by its lateral apothecia, white striate laciniae, compressed apices, and generally reddish to brown reaction with KOH. It appears to intergrade into *R. Montagnei* and would be more logically classed as a variety except for its larger spores. The species was recorded from Westport, Mass., by Henry Willey under *Ramalina subfraxinea* Nyl. (Lich. New Bed. 5. 1892)[1] and I collected a specimen at Westport Harbor during the summer of 1913. From Massachusetts it is found along the coast to Texas, and a stramineous phase which may deserve a name appears on the California coast.

Exsiccati: *No. 268.* Lich. Exsic. Merrill. Daytona, Fla., Mar. 7, 1911. *G. K. Merrill.*—called *R. Montagnei.*

Note: *Ramalina subasperata* Nyl. Flora **34:** 411. 1876. This species described from Cuba I have not observed. Nylander defined it as follows: "Accedens versus *complanatum,* sed thallo subtereti aut subcompressiusculo et sporae tenuiores. Thallus pallidus laevis, caespitose ramosus, superficie tuberculis albidis minutis subpapillosis sparsis nonnihil exasperatus, firmus (altit. circiter 2 centimeter; latit. 0.5–0.8 millim.); apothecia carneo-pallida, saepius glaucoalbido-suffusa (latit. 1–4 millim.), concava, receptaculo laevi parce tuberculis albis evanescentibus notato et ramulo corniculiformi subtus appendiculato; sporae subfusiformi oblongae, vulgo leviter curvulae vel subrectae, longit. 0.012–18 millim. crassit. 0.0035–45 millim.—Datur no. 25 c. d." l. c. It seems quite probable that this is synonymous with the preceeding species, though its spores are said to be largely curved.

Ramalina Bermudina Stirt. Jour. Linn. Soc. **14:** 370. 1874. "Thallus depresso-caespitosus, sat late expansus rigescens, laciniatus, laciniis linearibus dichotome multifidis, pallidus v. stramineo-pallidus v.-rufescens, subnitidus.

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[1] Spores recorded as $18\text{–}25 \times 3\text{–}4\mu$. Specimen preserved in U. S. Nat. Herbarium.

Apothecia marginalia subpedicellata concava majuscula margine integro, convina v. pallide rufescentia; sporae 8–nae, 1-septatae, oblongo-ellipsoideae saepe curvulae, 1010 m. 1 g. 5 m. cv."

"Isle Bermuda." This species I have not observed.

EXPLANATION OF PLATE XI

1. The DeNotaris type of *Ramalina Montagnei* at Rome (nat. size).
2. The Müller Arg. type of *Ramalina stenospora* at Chambésy (nat. size). Spores $\frac{20-24}{3-4}\mu$.

ERRATA AND OMISSIONS

PARTS I TO V

PART I.

Page 66, line 2; *after* pendulous *read* (rarely subfoliaceous = *R. Mannii* Tuck).
line 11; *after* rarely *read* monoblast.

Page 67, line 4; *for* Chapter *read* Society.
line 11; *for* 3.5–75μ *read* 3.5–7.5μ.

Page 68, line 4; *for* Elfvring *read* Elfving.
line 34; *after* chondroid *read* species.
after line 36; *add* No. 1972 Krypt. Exsic. Zahlbruckner, XX: 26: 1912.

Page 70, line 21; *for* Elfvring *read* Elfving.

Page 71, line 21; *after* mould *add* a condition also noticed once in *R. attenuata* from the Sandwich Islands and from Costa Rica.

PART II.

Page 82, line 33; *for* reticulated-rugose *read* reticulate-rugose.

Page 85, line 17; read *non* before *Ramalina.*
line 19; read *non* before *Ramalina.*
footnote 2; *after* Dec. *read* 500.

add following NOTE: Plants often distributed as *R. angustissima* (Anzi) Wain., (exception, No. 1252 Krypt. Exsic. Zahlbr.) are not *R. subfarinacea*, being only distinguishable from *R. farinacea* by a positive reaction with KOH. *R. subfarinacea* is distinctly of the stock of *R. calicaris* (L.) Fr. *emend.*, not of the *farinacea* stock. This is clearly shown in the original proposal of names; one as a morphological variety of *scopulorum*, the other as a chemical variety of *farinacea.*

Page 87, line 7; *for* lead *read* leads.

Page 88, line 17; *after* Palisades *add* Georgian Bay, Ontario.
line 34; *for* it *read, pollinaria.*

PART III.

Page 1, legend to Fig. 1, after *farinacea* add, and *intermedia.*

Page 2, line 4; *after* straight *add* $\frac{9-17}{4.5-7}\mu$.